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PHASES OF PELLAGRA.*

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Gentlemen: It is not only proper but a pleasure to accept the courtesy of an invitation to present a paper to the Rogers County Medical Society today.

Your secretary was advised that the subject would be "Some Phases of Pellagra." It is not expected that anything new will be presented, but the most important phase, I think, to the physicians who live in and about Claremore is the possibility of pellagra, especially among many of those who seek the curative properties of your radium wells. Second: The paucity of practical material found in the average text books; and, third, the possible cause of this disease and its overshadowing economic importance.

It is hardly necessary to dwell on the first other than to disabuse our minds of the fact that this progressive, chronic, nervous disease characterized by dermatitis, gastro-intestinal symptoms and cerebro-spinal manifestations, is found not only in Europe and other remote countries, but actually exists in Oklahoma.

Much practical information may be secured from different articles written by Dr. George C. Mizell of Atlanta, Ga. The Thompson-McFadden Pellagra Commission, Twentieth Street and Second Avenue, New York City, working under an endowment, have this disease under investigation. A request addressed to them will bring reprints of the literature down to January, 1915.

Dr. Mizell of Atlanta, Ga., presents the following:

"The theory of linolin as the cause of pellagra may be stated as follows:

It is proposed: (1st) That when linolin predominates in the fatty food of an individual it is deposited in the tissues as linolin and linolyl compounds.

(2nd) That linolin and linolyl compounds, by virtue of their unstable nature, readily undergo oxidation in marked contrast to olein, palmitin and stearin, which are among the most stable organic compounds in the animal body.

(3rd.) That fat and fatty tissue containing linolin and linolyl compounds in excess are unfit for performing the functions designed for normal fatty tissue.

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(4th) That the end products of oxidation in the case of linolin differ from those of olein, palmitin and stearin.

The only point that can be raised in opposition to either of the four propositions is in regard to the adaptability of linolin as a substitute for olein, palmitin and stearin in animal tissue. The difference in the chemical and physical properties of these fats seems to settle this question.

Bear in mind that this theory does not postulate the action of the neutral fat linolin as being a poisonous or toxic agent upon its entrance into the body, but that it gradually accumulates in the absence of other fatty food and when it is in excess in the fatty tissues and fatty compounds it renders these tissues and compounds unstable.

Nothing outside of our observations has been found upon which to base a conclusion as to just what period of time is required for this transition, but this period is evidently measured by years. Certain tissues undoubtedly retain their constituents longer than others. For example, it is reasonable to suppose that the residence of fat in adipose tissue is of longer duration than fat in the skin. Certain individuals may use up their fatty tissue and replace it more rapidly than others. The state of an individual's health also plays a part in the destructive and constructive metamorphosis of this tissue.

It appears that it is necessary for oil to be consumed for not less than a year and when the time has been so short there is always a history of excessive use. These patients have used the fat exclusively, and in many cases have seasoned boiled vegetables with it and have eaten much of fried foods.

Almost invariably the pellagrin admits that he eats more greasy food than any other members of his family. This is especially true when the pellagrin and other members of his family have previously enjoyed equal health.

In getting the history of oil consumption the past eighteen months should be covered. Much difficulty is occasionally experienced owing to the ignorance of some as to what they are eating. An intelligent patient states that he raises his own hogs and renders his own lard; denies visiting anywhere for any length of time. His wife supports these statements, yet it is finally shown that he has bought hogless lard for eighteen months prior to his first attack. An intelligent grocer states that he sends the lard from his own store, and never uses anything but pure lard. Upon request, he exhibits six empty buckets, only one of which is labeled "lard."

One significant point that may be mentioned here is that, except in children under one year of age, all pellagrins, about four hundred in number, that I have had the opportunity of making an investigation, have been cotton seed oil consumers. It is hard to believe that this association of oil consumption with pellagra is accidental.

We have recognized the fact that many people have consumed cotton seed oil in some of the various forms for years without apparent injury, and this has led to inquiry among our patients not suffering with pellagra as to how many were eating cotton seed oil and how long they were using it. The results were as follows:

Forty-eight per cent were users of cotton seed oil products.

Eighty per cent of them date the beginning of its use within the past three years.

Many of these patients showed symptoms of pellagra.

When we admit that the fat of the body has long residence therein, requiring months for any given area of fat to be utilized and replaced from

the food which enters the body; that adipose tissue may remain intact for months, or even years, it becomes clear that the pellagrin will be liable to attacks just so long as his adipose tissue contains linolin. Also, that by rapid reduction of the adipose he will become immune to attacks until the linolin is re-introduced into his body. Thus the period of accumulation or eradication becomes very variable according to the diet, health and individual disposition towards fat. We find such variations among our cases.

There is reason to believe that if linolin does not exceed a limited per cent in a mixture of fats it will, on account of the ease with which it undergoes oxidation, be utilized before the more stable fat, thus being removed from the body and not accumulating in harmful amounts.

"Just here it is interesting to note the physiological law which governs the deposit of fats. This law and this theory explain why the dermatitis is always more severe on the extremities and face when all parts are equally exposed to sunlight. Physiological compensation probably operates to reabsorb and transport the more liquid fats to the extremities, thus explaining the recurrence of dermatitis in these parts as long as three to twelve months after a previous attack, even though linolin has been excluded from the diet." In other words, Dr. Mizell believes this a bio-chemical poison.

The summary of the Second Progress Report of the Thompson-McFadden Pellagra Commission is as follows:

1. The large active foci of pellagra in Spartanburg County were found in and near the large centers of population, and particularly in the cotton-mill villages.

2. Children under the age of 2, adolescents for about five years following puberty and adult males in the active period of life were least frequently affected by pellagra. On the other hand, women from 20 to 44 years of age, old persons of both sexes and children from 2 to 10 years of age were most frequently affected.

3. No definite connection between occupation and the occurrence of pellagra has been found, although the high pellagra morbidity in the women and children points to the home as the place in which disease is usually contracted.

4. In the group of incident cases most thoroughly studied, evidence of close association with a pre-existing case was disclosed in more than 80 per cent.

5. A house-to-house canvass of the homes of over 5,000 people living in six endemic foci of pellagra failed to disclose any definite relation of the disease to any element of the dietary.

6. In these six villages new cases of pellagra originated almost exclusively in a house in which a pre-existing pellagrin was living, or next door to such a house, suggesting that the disease has spread from old cases as centers.

7. So far as we have observed, pellagra has spread most rapidly in districts where insanitary methods of sewage disposal have been in use.

8. Additional evidence has been obtained to support the conclusion that flies of the genus Simulium have nothing to do with pellagra.

9. Animal inoculations and the experimental study of intestinal bacteria have not yielded conclusive results.

10. The studies of the blood have shown a lymphocytosis in most cases, but have not disclosed any constant abnormality characteristic of pellagra.

11. There is no evidence of inheritance of pellagra.

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12. The immediate results of hygienic and dietetic treatment in adults have been good, but after returning to former conditions of environment, most of the cases have recurred. In children, prognosis is very much more favorable.

The chronicity of the disease and the helplessness of its victims, and possible peopling of our institutions make of this a great economic problem which must be worked out. One suggestion with reference to treatment aside from the matter of proper feeding, nursing, improved hygiene, sanitation and symptomatic measures.

Dr. Mizell, in the Journal Record of Medicine, June, 1911, says: "We all agree that pellagra is a sort of intoxication. With a knowledge of the source of any intoxication, we have two lines of attack open to us; by a specific agent we eradicate the cause and protection of the organism against deleterious effects of the poison. I have already shown that sulphur antagonizes the oxidation of the linolin. Calcium given in combination with it is especially indicated, hence, as a specific agent, we give calcium sulphide. Given in doses of one-half, to two or more grains three or more times daily it shows its effect in a few hours. In fact, the results are so prompt that I would feel like claiming specific action without a knowledge of its chemical action. We began the use of calcium sulphide eighteen months ago and have never been disappointed in the results. Under its influence I have seen the stools reduced to normal; the redness of the tongue fade; the eruption on the hands disappear. The intense burning and pain so prominent in some cases yield readily (usually in less than twenty-four hours). One case where the eruption had been continuous for twelve months, although being treated by arsenic, was relieved of suffering in twelve hours, was out of bed in three days, and had no erythema in ten days. In all cases this drug is all that is necessary to relieve aggravated cases of simple pellagra. That it does not relieve all cases is due to the fact that some are complicated by a long standing gastro-intestinal lesion which antedates the onset of pellagra by a more or less period of time. In these cases we have a totally distinct condition to treat. Some of these cases were under treatment several years previous to development of pellagra, suffering from various affections of gastro-intestinal origin, which was probably a predisposing factor in the development of pellagra.

So, believing that in calcium sulphid we have an agent capable of combating the deleterious action, and enabling the organism to rid itself of linolin, we have only to deal with these complicated cases which need special symptomatic treatment in addition."

PELLAGRA IN OKLAHOMA AND THE COMPARISON WITH STATISTICS FROM ELSEWHERE.*

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My only apology for presenting this subject at this time is the hope of renewing the discussion of the etiology and treatment of pellagra, the hope that in the future more and better statistics may be kept, and that more and better work may be accomplished looking to the solution of the etiology and treatment of this malady. I do not except to add one thing new or original in this article for its is a compilation from start to finish.

The New York Post-Graduate Medical School was instrumental in the establishment of a Commission to do some original research work in localities where pellagra existed in great numbers. This Commission was

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financed by Colonel Robert M. Thompson of New York City, and Mr. J. H. McFadden of Philadelphia, and was, therefore, known as the Thompson-McFadden Commission, and I shall give some quotations from a summary of a report of their work in Spartanburg County, South Carolina. This report includes the investigations done in the City of Spartanburg as compared with conditions in the rural districts. A few of the conclusions arrived at by this Commission are given as follows:

1. Pellagra shows a striking inequality of distribution in ten townships within the county, the township rate of prevalence per ten thousand of population varying from 0 to 71. The City of Spartanburg, with a population of 17,517, gave a rate of 49 per ten thousand against 34 per ten thousand for the remainder of the country.

2. Density of population, while showing a tendency to conform to the relative prevalence of the disease, does not alone offer an explanation of the geographic inequalities of its distribution within the county.

3. The cotton-mill village population gives a rate of prevalence of 104 per ten thousand against 19 per ten thousand for the remainder of the county, and against 16 per ten thousand for the rural sections alone.

4. The variations in the rates of prevalence in the ten townships are in a measure proportional to the presence or absence of a large mill-village population. Excluding the mill-village population, there is a still marked discrepancy between the townships, the rate of prevalence in the rural population ranging from 0 to 29 cases per ten thousand of population. The excessive prevalence among the farming classes is found in the townships which have a relatively large mill-village population.

5. The white population of the county gives a prevalence of 45 cases per ten thousand; the negro population a prevalence of 9.5 per ten thousand. Excluding the mill-village population, which is practically all white, the remaining white population still gives a rate of prevalence (25.2 per ten thousand)over two and one-half times that among the negroes.

6. The rate of prevalence per ten thousand for males in the county is 17; for females, 50.5. White males give a rate of 22.95 per ten thousand; white females, 87.5 per ten thousand; negro males, 3.9 per ten thousand; negro females, 14.9 per ten thousand.

7. The rate of prevalence among children under 10 years of age and among adults aged 45 years and older, is practically equal in the two sexes.

8. The rate of prevalence drops among males between the ages of 19 and 45 years, whereas for females there is a remarkable excess of prevalence between these ages.

10. The most significant fact with regard to occupation is the excessive prevalence of pellagra among women employed in housework.

18. Economic Status: In the majority of cases (85 per cent) economic conditions are poor and the disease is most prevalent among people of insufficient means.

20. Hygiene and Sanitation of Houses and Premises: The most insanitary condition found in the county is the absence of properly constructed privies. Outside of a part of the city of Spartanburg, which is supplied by a water-carriage sewerage system, there is no effective provision in the county for the proper disposal of human excreta. A second striking insanitary condition is the almost complete absence of effective screenings of dwellings. These two conditions present a situation highly favorable to the transmission of disease organisms eliminated in the excreta, both by direct contamination of food and person and by insects. This

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situation is naturally aggravated in the mill-villages and small towns by the greater congestion of houses. The absence of effective screening for dwellings gives rise to conditions conducive to the possible transfer of diseases transmitted by biting insects.

The United States Public Health Service has also done considerable work along the lines as those conducted by the Thompson-McFadden Commission, and it is interesting to note that the conclusions of the one Commission are very similar to those made by the other. The United States Public Health Service concluded that all the evidence had a tendency to show that pellagra is due to a dietary in which some essential element is reduced in amount, or from which it is altogether absent, or to the use of a dietary in which the element is present in injurious amounts. We find from Dr. Joseph Goldberger's writings, in a letter to the Surgeon General of United States Public Health Service, that he arrives at similar conclusions, which are clearly set forth in the following quotation:

> "In a paper published in the Public Health Reports of June 26, 1914, I called attention to certain observations which appear inexplicable on any theory of communicability. These observations show that although in many asylums new cases of pellagra develop in inmates even after 10, 15, and 20 years' residence, clearly indicating thereby that the cause of the disease exists and is operative in such asylums, yet at none has any one of the employees contracted the disease, though living under identical environmental conditions as the inmates, and many in most intimate association with them.
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> In order to obtain precise data bearing on these observations, Dr. Willets is making a careful study of the records of the Georgia State Sanitarium. These show that 996 patients admitted during 1910—excluding those that died, were discharged during their first year, or had pellagra on admission or within a year of admission—there remained at the institution after one year 418, and of this number 32, or 7.65 per cent. have developed pellagra since that time. Of the present employees of this asylum 293 have been in more or less intimate association with pellagrins and have lived in substantially the same or in identical environment as the asylum inmates for at least one year. If pellagra had developed among these employees at the same rate as it has among the inmates, then 22 of them should have the disease. As a matter of fact not a single one has it.
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> "The studies at the orphanage at Jackson show that on July 1, 1914, of 211 orphans 68, or 32 per cent., had pellagra.
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> "The distribution of these cases with respect to age developed the remarkable fact that practically all of the cases were in children between the ages of 6 and 12 years, of whom in consequence over 52 per cent were afflicted. In the group of 25 children under 6 years of age there were 2 cases, and in the group of 66 children over 12 years of age there was but one case. Inasmuch as all live under identical environmental conditions, the remarkable exemption of the group of younger and that of the older children is no more comprehensible on the basis of an infection than is the absolute immunity of the asylum employees."

The Georgia State Sanitarium has given a report of 27 cases of pellagra that were treated in the wards following the ideas expressed by the investigation of these different Commissions, and it is indeed interesting to note that of this number they report 4 designated as recoveries, 13 improved, 3 unchanged, and 7 died. The treatment outlined for this number of cases is simply one of diet, and I shall quote the menu prescribed for these patients:

For breakfast: One or two eggs, one-fourth pound fresh beef (usually fried as steak), wheat roll, coffee with milk and sugar, frequently oatmeal with milk and sugar, and an additional 8 ounces of milk.

For dinner: Fresh beef (one-fourth pound, either roasted, boiled, or fried), Irish potatoes, rice, onions, squash, and any green vegetables that

could be obtained, such as cowpeas and cabbage. Wheat bread daily; corn bread twice a week; coffee with milk and sugar.

For supper: One or two eggs, wheat bread daily, coffee with milk and sugar, and an additional 8 ounces of milk as desired.

In their report of these cases they conclude by stating: "It is evident that the arsenicals at present so much in vogue may be dispensed with without harm, if not actual benefit to the patient."

For comparison with these reports let us look at conditions as we find them in Oklahoma. The only statistics available are those to be found in the death reports on file in the office of the State Commissioner of Health. We are unable to secure any data whatsoever regarding the surroundings from whence these patients came. We have tabulated so as to include the different occupations, as well as race and sex, and the county from which each patient came.

We follow with a list of counties, population of same, and number of cases of pellagra shown from each county:

County—	Population.	Deaths.
Adair	10,535	2
Beckham	19,699	2
Bryan	29,854	3
Caddo	35,685	3
Cherokee	16,779	1
Choctaw	21,862	3
Cleveland	18,843	3
Comanche	41,489	1
Craig	17,404	2
Creek	26,223	2
Custer	23,231	1
Garfield	33,050	1
Garvin	26,545	1
Grant	18,760	1
Grady	30,309	1
Greer	16,449	2
Harmon	11,328	1
Haskell	18,875	4
Kay	26,999	2
Kiowa	27,526	2
Johnson	16,734	1
Latimer	11,321	1
Le Flore	29,127	1
Lincoln	34,779	5
Logan	31,740	2
Love	10,236	1
McClain	15,659	1
McCurtain	20,681	2
McIntosh	20,961	3
Marshall	11,619	3
Murray	12,744	1
Muskogee	52,743	10
Oklahoma	85,232	15
Okmulgee	21,115	3
Payne	23,735	1
Pittsburg	47,650	9
Pontotoc	24,331	2
Pottawatomie	43,595	9
Roger Mills	12,861	1
Rogers	17,736	3
Seminole	19,964	5
Sequoyah	25,005	3
Tillman	18,650	4
Tulsa	34,995	1
Wagoner	22,086	3
Washita	25,034	2
Woodward	16,592	1

	Males.	Females.	Totals.
Whites	28	77	
Black	5	22	
Indian	1	1	
	34	100	134

Between the ages of (As many as are designated in list):

	Males.	Females.
10-20	4	6
20-30	2	20
30-40	2	19
40-50	4	25
50-60	5	15
60-70	7	7
70-80	4	1
80-90		1

Summary as to occupation:

Housewives	57	
Farmers	18	
Servants	10	
Actress	1	
Students	2	
Teachers	2	
Laborers	2	
Plasterer	1	
Nightwatch	1	
Dressmaker	1	
Merchant	1	
Drayman	1	97
No occupation given		37
		134

Of those designated, the above tabulation shows 25 from the country, and 69 from town.

(Above listed statistics on Pellagra are shown as for year beginning January 1, 1914.)

If we hope to accomplish anything of value in our research work **we must have more statistics;** we must know something about the cases **while living.** If we could study the cases in this state today, getting the data similar to that given in the report from the Thompson-McFadden Commission, and, in addition to this, if we could find out about the kinds and amount of diet taken by each case, the mode of living, together with a general topography of the county where each case is found, and **compare this with like conditions of those not affected,** we might at least hope to get additional information on the subject, even though it be negative. If the theory that improper diet is the cause of pellagra is correct, might not it be a good idea to know something about the soil analysis in communities where pellagra is most prevalent, and compare this with like soil conditions where it does not exist? If some element is lacking in the food substance, is it not possible for such a shortage to come from an imperfect vegetable development due to imperfect soil conditions?

I believe it will be necessary for us to make comparisons of hygienic conditions in communities where pellagra DOES NOT EXIST as compared with conditions where IT DOES EXIST in order that the statistics as compiled by the various Commissions at the present time may be of value. While we are thus speculating, I would like to ask the question: MIGHT NOT THE ETIOLOGY OF PELLAGRA AFTER ALL BE A LACK OF IMPERFECT METABOLISM DUE TO SOME DISTURBANCE IN THOSE MYSTERIOUS INTERNAL SECRETIONS?

LOCAL ANESTHESIA.*

Dr. D. E. Little, Eufaula, Oklahoma.

Whoever procures exemption from physical suffering may be considered a public benefactor and in no other field of labor has there been a better chance of earning such a title than in producing local anesthesia for the relief of pain in surgery. But, as a general rule, a large percentage of operators have made a failure of local anesthetics and have discarded and condemned them. While this paper will not be an exhaustive treatise on the subject, I will endeavor to make it as plain and practical as possible and give all the information that will be required to handle local anesthetics successfully.

The late discovery of certain drugs or chemicals having the power of anesthetizing limited areas by local applications and hypodermic injections was an event but little less notable than the discovery of chloroform and ether.

While we may fully realize that the use of local anesthetics is responsible for the high development of present day conservative surgery, the entire absence of prejudice against general anesthetics is shown by the favor which nitrous oxide gas and chloride of ethyl have found, and in the ardent support which has been given them by those who are familiar with their sphere and proper mode of administration.

The degree of perfection which has been reached in the technique, making possible the performance of extensive operations, under local and regional anesthesia, is one of the most noteworthy advancements made in surgery during the last decade, and while it may be true that the perfect anesthetic has not yet been discovered, it is even more probable that we come short of the full benefits that might accrue from the perfect application of those now at our command.

The extent to which the field of local and regional anesthetics has been developed, and the constantly enlarging range of their applicability, as evidenced by the remarkable performances of those who have acquired accurate, precise methods, is often a surprise to physicians who are brought face to face with the work that is actually being done, and especially to those who perhaps had never recognized the possibilities of a proper technique.

The fear of poisoning the patient, is a relic of the days in which strong solutions of cocain were advocated, and a somewhat well marked inclination on the part of some surgeons to cling to the first part of the adage: "Be not the first by whom the new is tried, nor yet the last to cast the old aside," is doubtless responsible for a certain amount of skepticism and actual, or at least professed disbelief, regarding the possibility of operating painlessly, and successfully in serious cases, without general anesthesia; yet, when confronted with facts in proof of this assertion, theoretical arguments to the contrary are distinctly out of place and deserve no more than passing consideration.

On the other hand, when we consider that nine-tenths of the medical profession has no conception of the work which constitutes the daily routine of the remaining tenth, it is not strange that a certain degree of incredibility should exist among those whose attention is for the first time directed toward this marked advancement, nor that as the demand for special services increases, a lively interest is manifested by the more progressive element of the profession to which the public must look for whatever progress is made in matters relating to the prevention and cure of disease.

Read before McIntosh County Medical Society.

There is no specialty in medicine in which local and regional anesthesia are more attractive and more applicable than its use in minor surgery, and the enthusiasm of some of its more ardent advocates is responsible, perhaps more than anything else, for the impression which prevails in some quarters, that all surgery done under local anesthesia is minor surgery.

The several methods by which local anesthetics are employed and the development of the technique differing somewhat from that formerly in vogue, necessitates some distinction between the various terms used to designate certain plans of procedure, some difference between the principles involved and certain limitations of the effect produced.

Local anesthesia is a term used in connection with methods which have for their object the desensitizing of certain areas directly affected by the injection of certain agents into them, producing the desired result either by the direct action of the anesthetic used, or by pressure caused by the liberal injection of certain fluids which so compress the nervous equipment of the parts that pain is not felt when they are incised or otherwise manipulated.

Regional anesthesia is the term used which defines the condition produced within the area supplied by certain nerves when such nerve trunks are anesthetized by peri-neural infiltration and the resulting compression, or by the direct action of the anesthetic on them, thereby depriving the entire area to which their branches are distributed of sensation. Regional anesthesia is an adaptation of spinal anesthesia, differing only from it in the locality to which it is applied. It is also known as nerve blocking.

In the development of technique which is now considered most satisfactory, several details have become recognized as contributing beneficially to the general result. Of these the principal are the use of weak, rather than strong solutions, their combinations with certain vaso-constrictors, and the proper anesthetization of the skin itself by endermic injections.

As the scope of local anesthesia has been extended into realms once considered far beyond any possibility of expectation, it has brought about a more thorough appreciation of the undesirable features associated with the use of cocaine, indispensable although it was, for a long time.

Even now it is doubtless the most popular, but it is not the safest nor the best local anesthetic, and whatever claims may be made in favor of it as preferable to some of the more recent chemicals produced for similar purposes, are probably due to its priority of introduction, for there are others fully, if not more, efficient, less irritant and less toxic.

The chief disadvantages of cocaine are that it is toxic, exerting its influence to an alarming degree at times, and when least expected, and the difficulty of securing a solution absolutely sterile, because it is decomposed and rendered inert by heat.

Beta-eucain lactate was one of the first substitutes for cocaine offered to the profession, and for short operations fulfills all the requirements of an agent intended for the production of local anesthesia. It is said to be one-fourth as toxic as cocaine. One of its disadvantages is that it acts more slowly and its effects disappear more rapidly than other preparations of this class. Solutions of beta-eucain can be sterilized by boiling, and for operations that can be completed in a few minutes it is preferable to cocaine.

Stovain, of which much was expected on account of its apparent splendid action in spinal anesthesia, has never given the results others claimed to have obtained. In several cases there was apparently no anesthetic effect when used in sufficient quantity to secure benefits of infiltration, such as might have been obtained from sterile water alone.

Alypin is a drug which exerts its anesthetic action upon mucous surfaces when topically applied, and when injected into the tissues produces anesthesia quite rapidly, the effect continuing from five to ten minutes, according to the strength used. It is said to be much less toxic than cocaine and solutions of it may be boiled for sterilization. No evidence of irritation have been noticed during the period of anesthesia, but after the effect passes off some patients complain of a burning sensation which is sometimes quite marked. When used alone it acts as a vaso-motor dilator, and, as a result, an annoying oozing of blood is liable to continue for some hours. This can be corrected by the addition of adrenalin.

Quinine and urea hydrochloride has been a much-lauded harmful local anesthetic, and during the last few years has become quite popular among certain physicians. My experience has not been very satisfactory, and I find if too strong solutions are used there will be considerable sloughing which may give distress to the patient and worry to yourself. I have discarded it for which I consider the ideal local anesthetic, of which I will speak later.

Phenol and Ethyl Chloride are ideal anesthetics to anesthetize the skin surface prior to introducing your hypodermic needle. They are not satisfactory where one has much cutting to do.

All of the foregoing drugs have, in my opinion, been surpassed by novocain, a local anesthetic which seems entirely free from irritating effect and but one-sixth as toxic as cocaine. Aqueous solutions are permanent and can be repeatedly sterilized by boiling without impairing the activity of the drug. Its action is very prompt and the anesthesia produced continues for an unusual period, especially when used in combination with adrenalin—in fact, its behavior in this particular is remarkable, for the addition of adrenalin increase the degree and the duration of its anesthetic action to such extent that a complete anesthesia of the parts is frequently observed after an operation of more than twenty minutes duration is completed.

In the regional anesthesia, when one is fortunate enough to deposit the solution in very close proximity to a nerve trunk, complete sensory paralysis has been observed an hour after injection. That these results can be secured with perfect safety—in fact, without any deleterious effect whatever —is a matter of so great importance that its value cannot well be overestimated.

Anesthesia of limited areas, produced by infiltrating the tissues with sterile water, was quite popular a few years ago, and for small incisions it answers the purpose very nicely, but when a considerable area is involved there is more or less after pain on account of the distention caused in parts which do not drain toward the line of incision.

Sterile, normal salt solutions is suitable for operations which last but a few minutes. It is less painful than water, but is more transitory in its effect, as, being isotonic with the fluids of the body,, it is absorbed more quickly.

For infiltration anesthesia, the well known Schliech solutions are quite well adapted, and preferable to sterile water or salt solution. They contain a minimum of cocaine and as far as my experience warrants an opinion, no unpleasant after effects may be feared. Since the introduction of novocaine, however, there is little advantage in having a variety of other combinations at hand, for this latest addition seems to respond to every requirement.

In addition to the foregoing anesthetics, there are a few which are especially adapted for topical application, and for these frequent use will be found in the routine of the average practitioner. The best of these is anes-

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thesin and orthoform. They are employed as dusting powders, as a rule, although they may be incorporated into ointments or suppositories.

The technique for producing local anesthesia and the steps necessary are at this date quite well known to most physicians, yet perfect success is largely dependent upon familiarity with the proper technique and careful attention to details. The initial prick of the needle is so trifling that there is little occasion for providing against the mometary pain it causes. If considered advisable, however, the spot may be touched with a minute quantity of pure phenol or a chloride of ethyl spray may be directed toward it.

Where it can be done, a fold of the skin is caught up between the forefinger and the thumb and the point of the needle is quickly thrust into, but not through, the skin and a few drops of the solution immediately injected. This at once produces the blanched bleb or wheal that indicates anesthesia of the part. As soon as it appears the needle is carried a little farther and more solution injected, always injecting ahead of the needle point, until the entire area of the proposed incision is desensitized.

With the needle still in position (within the skin, not under it), it is withdrawn just sufficient to permit the syringe to slightly elevate and the point directed downward, when it is again inserted deeper and a few more drops injected. This done, it is again partly withdrawn, then again directed toward the deeper structures and an additional injection made. This procedure is repeated until the point of insertion is reached, after which the needle is withdrawn, having anesthetized the entire area with a single puncture of the skin. Should the syringe need refilling it can be done without removing the needle by simply detaching it in the usual manner. Over distention on the tissues must be guarded against. It is one of the most frequent causes of post-operative pains and may cause sloughing. In determining upon the particular method best suited for various operations, several points should be considered. Before proceeding to operate under local anesthesia, the nerve distribution to the parts involved should be reviewed. If there is little tissue to be divided this may perhaps be unnecessary, but attention to this feature as a matter of routine is good practice. Much of the ineffectual action of anesthetics that is reported, is doubtless due to lack of care and attention to detail.

The temperament of a patient is no small factor in determining the sum of the results obtained under this method. With a patient moderately calm and courageous, or one who is of the phlegmatic temperament, little disposed to exertion or excitement, a moderate degree of anesthesia is quite as effective as twice or thrice that would be, in one whom the nervous temperament was dominant. Numerous insertions of the needle should be avoided, especially when no tissue is to be removed, as every puncture made is liable to become infected and later on develop into an irritable spot that remains after the line of incision has been fully repaired. In operating upon boils, abscesses, felons, etc., where you find the skin very sensitive, it is best to make your first injection of the anesthetic some distance away from the affected part. By so doing you can work up to the spot to be incised with very little inconvenience and completely desensitize the part to be operated upon.

For a practitioner to attempt to open an abscess, felon, etc., without the use of a local anesthetic shows a lack of doing good practice and "up-to-dateness." It is a procedure that has been discarded as a relic of barbarism. People like to be relieved of pain and when a patient enters my office with an affection needing a local anesthetic I approach the ordeal with complete confidence that I will be able to operate upon the part without any pain to the patient and feel that my patient will be grateful for the time

and trouble I have taken. I can do better work and more thorough than in the days gone by, when a patient entered one's office and you took a scalpel, seized the patient in the half-nelson and proceeded to stab and thrust and all the time wrestling the patient over the office, waiting for an opportunity to stick him again.

In nose and throat work, where application is made to the mucous membrane, I prefer from four to ten per cent, depending upon the amount of surface I wish to operate on and the temperament of my patient. In urethral work I prefer a ten per cent solution of cocaine. I find that the local application of cocaine on mucous surfaces is much less dangerous than by injection, and in my hands I obtain much better results than with any other local anesthetic. For other work I prefer one-half to one percent novocaine, with adrenalin and a formula made up as follows:

Cocain Hydro, Gr. 80, or novocain, Gr. Gr. 20; Atropine sulp., Gr. 3-10; Chloral Hydrate, Gr. 20; Phenoresorcin, Gr. 1-2; Aqua Cinnamon, q. s., oz. 4. Mix and filter through absorbent cotton until clear.

The above formula represents four per cent of cocaine and one per cent of novocain. In having these formula compounded you should have it done by some one who is careful and competent and see that the drugs are fresh and pure. I have this formula compounded by the Greiner-Kelly Drug Co., of Dallas, and it has proved very satisfactory. I have used the solution when it was five years old and obtained as good results as when freshly prepared. Atropine given in small doses, as in this formula, is a cardiac, respiratory and spinal stimulant and tends to counteract the effects of the cocaine more than any other remedy we possess. By the term Phenoresorcin is meant a mixture of carbolic acid and resorcin, sixty-seven parts of the former and thirty-three of the latter. The mixture crystalizes on cooling and by the addition of ten per cent of water. Phneoresorcin is not only an efficient and valuable antiseptic and local anesthetic, but is indispensible in localizing the anesthesia and preventing the constitutional absorptions. It also aids in preserving the preparation. While a common cocaine solution is almost worthless in a few weeks, this preserves the preparation for months and years. Chloral hydrate has a marked anesthetic action and assists the other remedies in localizing the anesthesia. Aqua cinnamon is made as follows: Oil cinnamon, Gtt. 6; Glycerine, Dr. 1; Aqua Dist., q. s. oz. 4. Mix and filter through absorbent cotton until clear. This makes an aromatic solution and also assists in preserving the preparation.

There is a right and a wrong way for everything and if the operator will follow the instructions given and observe the following "pointers" I will assure him that he will always be successful. First, always operate under aseptic precautions. Second, use a glass syringe and keep it aseptic and in working order. Third, take plenty of time and never get in a hurry. Fourth, always operate more slowly on weak, nervous and sickly people than you would on the robust. Fifth, be sure you inject the anesthetic in the proper place and no unnecessary quantity. Observe these rules and I am sure you will be able to do good work and your patient will always feel grateful.

Some like their whiskey straight,
Others like pretty women and champagne,
But deliver me from one and all,
And give me a doctor that relieves my pain.

SURGICAL ANESTHESIA.*

Dr. T. Craig Burns, Oklahoma City, Okla.

The agents producing surgical anesthesia must possess the following properties, namely: Produce universal insensibility; be readily introduced into the circulation, thus producing its effects gradually and progressively so that its action may be under control; it must produce such a loss of motive power so that the most delicate surgical operation may be performed; its action must in no way interfere with respiration, circulation or other vital processes, and, lastly, as soon as the anesthetic is withdrawn the whole organism shall return to its normal function.

During an anesthetic considerable attention must be paid to the degree of the patency of the nasal, oral, pharyngeal and laryngeal channels through which the respiratory current enters and leaves the lungs. It is impossible to overestimate the importance of efficient respiration, as it is necessary for efficient circulation. When we have any degree of obstruction then the venous system begins to show signs of over-fullness and we may have swelling of the tongue and adjacent parts; the veins at the site of the operation bleed more freely and the pulse changes in character. Also we note changes in the breathing which, under no disturbing influences had been regular and quiet, but now becomes quicker, more stertorous, and often irregular.

When once the patient has been brought well under the influence of the anesthetic the respiration may usually be made to vary with the quantity of the anesthetic, the degree of obstruction and amount of traumatic stimuli.

In order to maintain a proper level of anesthesia the anesthetist must be guided by the respiration, lid reflex, state of the pupil, strength and frequency of the pulse, the color of the face and lips and the rigidity of the muscles, as many times we are unable to take one or two of these signs as demonstrating the degree of anesthesia.

In deciding upon the drug to be employed for producing anesthesia, one of the most important considerations should be the safety of the patient, taking careful consideration of the age, sex, habits, nature of operation, preparation and physical condition.

Every patient before undergoing an anesthetic for a surgical operation should have his heart and lungs examined thoroughly, and the urine should be examined both chemically and microscopically, as in many cases where the urine is strongly acid it should be brought as nearly neutral as possible, as I believe it helps to prevent an acidosis following operation.

When a patient is placed on the table preparatory to starting the anesthesia, I strap a phonendoscope over the heart so that at all times during the operation I can keep track of the heart's action. No one is allowed to handle the patient during the induction stage and all unnecessary noise is eliminated.

Of the three principal drugs producing anesthesia, I wish to consider ether and nitrous oxid, merely mentioning chloroform. In ether we have a cheap drug which is relatively safe in inexperienced hands. During its induction period we have frequently suffocating sensation which in a great many instances produces excitement stage.

Ether, on account of its irritant effect, throws considerable strain on the kidneys and, due to its forming a chemical union with the blood, its

*Read at Bartlesville Meeting, Oklahoma State Medical Association, May, 1915.

elimination is very slow. It hinders phagocytosis, which is a very important objection in a septic case. The postoperative vomiting is very distressing, being caused, I believe, to the swallowing of ether-laden mucous in the induction period.

On account of the irritant effect of ether to the mucous membrane, we have more or less mucous to contend with, especially when the patient has not had a preliminary dose of morphine and atrophine. In these cases I have seen cyanosis quickly relieved by placing in the throat a mucous tube which is similar to Young's perineal drain.

Now as to Nitrous Oxid Oxygen anesthesia. Let us first consider its few advantages, namely: The cost is much more than ether. Not being able, in all cases, to give pronounced relaxation, but by adding a very small amount of ether, this is overcome. The difficulty of administration, as it requires a trained anesthetist.

On the other hand you have a patient losing consciousness after the first five or six inhalations; no excitement stage, suffocating sensation or irritant effect on the genito-urinary tract; rapid recovery from the anesthetic and with a clear mind and lack of dread for future anesthesia. Postoperative nausea and vomiting practically nil, as the records of the hospitals show, that 90% of the patients given nitrous oxid oxygen in the induction period with ether afterward did not vomit, but that between 70 and 80% given straight ether have vomited.

In the beginning of a nitrous oxide oxygen anesthesia, rebreathing should not be used until the lungs are fully cleansed after six to ten inhalations. We may then start it. Sometimes in the management of a difficult case the gas may be given under positive pressure by keeping the bag slightly overdistended.

Ether may be added to the nitrous oxid, but not until the patient's respiration has been stimulated by rebreathing; then it is given. During the course of an hour's operation not more than an ounce or ounce and one-half is necessary to give the best results.

The reason why we use rebreathing is to prevent acapnia or a deficiency in the carbon dioxide content of the blood. Henderson has been able to reduce animals to a state of extreme shock by over-ventilation of the lungs. He asserts that acapnia causes osmotic changes in the tissues, resulting in the passage of water from the blood into the lymph and into the tissue cells, and dilation of the finer veins. Interference with the normal filling of the right side of the heart by this process is the essential phenomenon in surgical shock. It must be accepted whether we believe Henderson or not, that the accumulation of carbon dioxide by rebreathing stimulates respiration and circulation and with oxygen at hand and with care you obtain no deleterious effects from it.

During ether anesthesia, by the open method, we help to produce an acapnia, as ether diminishes the formation of carbon dioxide and by stimulating the respiration it hastens its elimination by ventilation of the lungs.

In a nitrous oxide oxygen anesthetic the patient must be watched very closely, as the changes come quickly and no cyanosis beyond the slightest tinge should be allowed. When ether is given in conjunction with nitrous oxide the patient should be kept pink.

The danger signals of a nitrous oxide anesthetic are irregular breathing, pallor or deep cyanosis, excessive secretion of mucous and convulsive movements.

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LOCAL ANESTHESIA IN GENERAL SURGERY—THE PREVENTION OF AFTER PAIN AND SHOCK.*

Leigh F. Watson, M. D., Oklahoma City, Okla.

The phenomena of pain and shock has been known for many centuries, and clinically studied and classified by many ancient as well as modern surgeons. It is impossible to accurately estimate the degree of afferent nerve stimulation that is requisite to destroy life, because the shock value of every individual varies. While it is probable that shock value is largely a personal factor, or physiological function, it is nevertheless true that there are racial values as well as individual values. Some claim it depends on the state of the internal secretions and their balance. The hyperthyrodial Swiss has a higher shock value than the Italian, and the lively Frenchman is more easily perturbed than the phelgmatic German. A person in middle age has a lower shock value than a child or an old person.

It has been shown that the shock value of an individual varies from time to time, and different parts of the body have different shock values. A blow below the belt will cause acute distress while the same blow on the chest will pass unnoticed. Another element is that of unpreparedness; a false step in the dark may momentarily shake the nerves of the strongest man. A piece of bad news or a terrifying sight produces a distinct psychic trauma or shock. Many people have indeed died of simple fright.

What we term shock is undoubtedly a defensive reaction of the automatic nervous system against assault that has been committed. If it were not for the protective influence of shock we would succumb more quickly and the reaction would be more intense than now occurs. It may fail at times, or even be too intense for the safety of the individual, but the fact remains that, as Crile has pointed out, the shock mechanism is one forged many generations ago in the history of the race, when some apparatus was necessary to secure instant preparation for flight or withdrawal on occasion of danger.

The most intense form of shock is commonly regarded as those cases of sudden death where there is no precedent disease—death by inhibition—death brought about by events that produce no obvious lesion, death following immersion in water before the patient has time to drown, death following a simple operation where the pulse and temperature remain normal until death occurs from respiratory failure. When on the other hand, shock falls short of immediate death, there may be profound shock for 24 to 48 hours, which terminates in death or gradual recovery. This is the common kind of shock, from which people suffer after serious injury or operation.

Shock also has relation to things just prior to operation. Disturbances of the mind just previous to operation are due to fear and anxiety. This is psychic shock. There are many other factors that indirectly produce shock. If the disease for which surgical intervention promises relief is one which effects the nervous system in a depressing way, any delay in operation will bring the patient to the operating room in a condition of shock. In these cases as in those where the operation is unexpected, the the dangers of the unavoidable psychic, anesthetic and operative shock are naturally greater. This is usually evident in cases of intestinal obstruction and exophthalmic goiter, therefore, the earlier the diagnosis by the physician. the greater the success of the operation, both as to the local disease which demands a cure and the general nervous system which has to stand

*Read before Oklahoma State Medical Association, Bartlesville, May, 1915.

the trauma of the operative cure. There is a class of cases which, after the infliction of trauma, the subject displays emotional perturbation, rallies, seems to be doing well, and yet ultimately develops symptoms which may be unusually severe or terminate in death.

Crile states that the dangers from high blood pressure are embolism, thrombosis, angina pectoris and broncho-pneumonia. Low blood presssure may be either physical or psychic and is usually associated with shock. anemia or hemorrhage, which should be controlled before the operation.

When hysteria continues after trauma, the patient will probably recover with little physical damage. When the early psychical disturbances have play, but are controlled, traumatic neurasthenia, or the more marked type of delayed shock may ensue. Sometimes there is no initial hysteria; the subject displays a peculiar apathy and death is quite sure to follow. In such cases the autonomic nervous system is thoroughly disorganized, probably by inhibition from above. A woman who does not cry in the presence of a great sorrow is as liable to die as the Bengalese who can not sweat on a summer day.

In traumatic neurasthenia the protective mechanism of the body is taken by surprise. There is no preparatory adjustment of the blood distribution in the body. It is easy to understand how, given a high shock value, under such circumstances the protective adaptation may be out of all proportion to the occasion, as when an ocean liner strikes an iceberg or a telephone operator is excited by a rumor of fire.

Henderson of Yale, has shown that there is a definite relation between shock. vaso-constriction and that condition of acapnia in which there is such a diminution of carbonic acid gas in the tissues and blood that the respiration is slowed until the carbonic acid gas accumulates up to stimulating strength, and hyperphoea or dysponea returns. In laparotomy such a loss of carbonic acid gas may occur in this way that acapnia is produced, and may be a factor in death under anesthesia or afterwards.

It is well known that mere opening of the abdomen abolishes persistalsis of the stomach and greatly reduces that of the intestines. Motility is not restored for a considerable time after the abdomen is closed. While Henderson thinks acapnia is the cause of shock, Crookshank believes it is a part of the shock, since Crile has demonstrated that the carbonic acid gas is not given off if the displaced viscera are covered with omentum. It is interesting to note that Mr. Lane covers the intestines with a vaselined silk sheet, during abdominal operations, and it is stated that his shock effects are remarkably slight.

The simplest and clearest cases of fatal apnoea are those which occur after intense pain. When death follows intense physical suffering not complicated by hemorrhage, there are two principal stages. At first the excessive breathing diminishes the carbonic acid content of the blood. If at any time after this condition of acapnia has been induced the pain is greatly diminished and the respiratory center is allowed to relapse into a standstill, fatal apnoea vera may occur. If, on the other hand, the pain is sufficiently continuous to keep the respiratory center continually excited, then apnoea is prevented and the condition of acapnia becomes more and more acute and general until the circulation fails, and the subject sinks into surgical shock, cording to Crile's definition. Both fatal apnoea and the more slowly developing failure of circulation are due primarily to the excessive breathing induced by the painful afferent nerve stimulation.

Henderson says those case of fatal apnoea, which more than any other interest the clinician, are the failures of respiration under anesthesia. If a patient ceases to breathe in his bed it is his own fault, but if he does so

on the operating table the anesthetist has to bear the responsibility. For such cases of apnoea the acapnia hypothesis affords a simple explanation. The anesthesia diminishes the strength of the afferent inflowing irritations. Furthermore, the profound anesthesia raises the threshold of the respiratory center for carbonic acid gas, in other words, the respiratory center of man or animal in profound anesthesia automatically maintains more than the normal carbonic acid gas content in the blood. Thus when man, woman or child has suffered prolonged pain and has thereby been brought into condition of more or less acapnia, the production of anesthesia by removing the afferent pain stimuli, and also by raising the threshold and diminishing the sensitiveness of the respiratory center for carbonic acid gas, inevitably leads to acapnia. The acapnia hypothesis of Henderson requires the prevention of excessive pulmonary ventilation. The administration of morphine and full anesthesia diminish the activity of respiration under pain and thus prevent acapnia. If, however, you administer morphine or chloroform to a subject after he has suffered some time, you hasten fatal apnoea, unless you give carbonic acid gas at the same time.

In India it is customary to partially smother men who have been severely injured. It would probably be wise when a man's legs have been crushed in a railway wreck to require him to breath into a paper bag to prevent apnoea. The most important factor in the prevention of shock is to prevent pain.

The elaborate breathing exercise of the Yoga or Vendanta philosophy, practiced for more than a thousand years in India, are means through which, it is claimed, the subject can gain control over the heart rate and other functions, can render himself insensitive to pain, or even unconscious, and can induce mental exaltion and hallucination. In some of the older works on surgery it was directed that prior to a minor operation the subject should for a few minutes perform forced respiration.

Crile states, in experiments on dogs subjected to trauma the brain cells showed no change when the trauma was limited to territories disconnected from the brain by local anesthetization. Under nitrous oxid anesthesia the brain cell changes after equal trauma caused about one-third as much change as under ether.

Crile states that shock is the excessive conversion of potential into kinetic energy in response to adequate stimuli.

Shock or exhaustion may be produced by fear, worry, physical injury, injection, hemorrhage, muscular exertion, insomnia, or starvation. Brain cells from any of these causes look alike. The organs that convert latent into kinetic energy are: brain, thyroid, suprarenals, liver and muscles.

Experimentally, Crile has shown that it requires much more trauma to produce brain cell changes when the blood pressure is kept at its normal level than when it is permitted to follow its natural course downward.

Ether anesthetizes by dissolving liquid substance of brain cells. Nitrous oxide anesthetizes by interfering with the use of oxygen by the brain cells. Local anesthesia blocks nerve communication between operation and brain.

Crile says: "The brain cell changes are not due to the inhalation anesthetic alone, yet their extent is to a considerable degree determined by the anesthetic used."

Next to the operation itself, the post-operative pain is the principal factor with which we have to contend in the production of shock. The nerve block prevents post-operative stimulation of the brain cells, therefore, there can be no after pain or shock and exhaustion of the subjective mind. The lessening of shock reduces the mortality rate, and renders border-line cases under the old methods safe risks. The importance of this is evident

when one considers the number of cases operated on each year in which the outcome is uncertain or doubtful when they go on the table. Crile says, under general anesthesia the patient may not move when you cut unblocked nerves, but there will be the same degree of shock as though he was cut without any anesthetic whatever. It must be remembered that with inhalation anesthesia the greater part of the brain is awake and responds to injury just the same as though no anesthetic had been used. The entire subjective mind in unaesthetized and sensitive to the slightest trauma, with the resultant nervous shock.

With the patient under general anesthesia one is often tempted to make an incomplete nerve block, especially when the patient has been anaesthetized for a considerable time. The pain and shock vary inversely with the completeness of the nerve block.

Post operative pain is most conspicuously diminished by the use of morphine, nerve block, careful handling of tissues, sharp dissection and nitrous oxide anaesthesia.

Crile says "In the choice of anesthetic, it should be emphasized that the patient is the first consideration and not the prejudice of a surgeon for a certain method."

General anesthesia protects the brain from psychic strain alone. Local anesthesia protects the brain from the effects of local traumatic injury. Morphine affords the same protection as general anesthesia against psychic shock. Morphine reduces both traumatic and psychic shock.

In conclusion I want to state that the operative cases receiving general anesthesia that showed the least shock were those operated on under nitrous oxide anesthesia administered by Dr. Burns, and a complete nerve block of the operative field.

DISCUSSION.*

Opening discussion by Dr. W. E. Dicken, Oklahoma City.

Dr. W. E. Dicken, Oklahoma City:—We are told that we have a subjective and objective mind. It seems as though Dr. Crile and other great men have gone through this thing to such an extent that the smaller man loses the vision, but evidently there is a vision there. The question of anesthesia by any means, either general or local, is a question that is being discussed and thought of all over the country, and eventually there will be a time when this question will be settled, and settled right. I hope it will, but up to this time I don't think we have any ideal general anesthetic You take the local anesthetic. We know there is a field for that. There is a field for local anesthesia that we can't get away from; we have to use it. There is also a field for nitrous oxide anesthesia, and we can't get away from that, and the same way with ether. Of course, chloroform has only been mentioned. I don't think it is being used in general surgery anywhere. But in local anesthesia the patient is conscious, for the subconscious mind is awake and also the subjective mind. The patient is subject to suggestions and the noises and bustle that naturaly occurs during the operation. In nitrous oxide anesthesia, as Dr. Watson spoke, it seems to break down the least number of brain cells. Ether, of course, while it gives the objective mind a general oblivion to pain, at the same time your inner mind or subjective mind is awake. There is a shock even with ether. This mind is constantly awake and records

*Motion was made and seconded that the two papers above be read and discussions be made together. Motion prevailed.

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these things, and it seems to me from a surgical standpoint that Dr. Crile has almost solved the mystery of general anesthesia.

I have certainly enjoyed the papers. While I have used all the different anesthetics, I will say that Dr. Burns gives an ideal anesthetic, as he has given some for me and the method seems to be almost ideal, yet there are some objectionable features. We have not entirely reached the point of perfection and I hope the time will come when the profession will have something that will do away with some of the objectionable features. I will say, as a rule, I prefer ether to anything else.

Dr. F. H. Clark, El Reno: The principal thing, Mr. Chairman, that is of value to every one of us in this paper is the prevention of shock. Is it the anesthesia itself or the form of the administration, or what is it? It is more a question of prevention of shock with the men who do abdominal work. Personally, I have been hanging to ether. The question of shock, I think, in a measure, comes from the manner of the operator very much more than from the anesthetic. Most of the severe cases I have seen there would be no shock at all. The thing is—what is the best general anesthesia? In the South, until the last year, they were using chloroform, but it is practically done away with there now and the clinics in the north have been using it far in excess of ether. Local anesthesia is so absolutely dependent upon the technique of the man and the amount he uses it in that I feel that it should be confined to the few experts. A man has to be an expert to do it. It should be administered by the few men who are gifted in it.

Dr. R. M. Howard, Oklahoma City: I believe, so far as we know, that the blocking of the nerves with the use of oxide gas and the addition of ether when needed, is the most ideal anesthesia that we have discovered so far. There are two classes of cases in particular that I think is of value. Unfortunately, we have a good many cases coming to us for operative procedure—people who are on the verge of nerve exhaustion as a result of the disease from which they have been suffering—and a great many of these cases through the surgical procedure are pushed into a class that is very undesirable. When they come to us on the verge of nervous collapse, and by our procedure we throw them into that class, it is very difficult for us to get results. Then another class of cases is the septic cases, particularly peritoneum cases or inflammatory conditions about the abdomen. Crile says that death takes place in these cases as a result of the exhaustion of the vital forces which are endeavoring to keep up the proper balance, and if we can preserve those vital forces by the use of an anesthesia that prevents post-operative trouble by nerve blocking, that prevents also post-operative trouble and to a certain extent the mental pain and suffering which the patient must go through with, we evidently do a great deal to conserve these vital forces which are essential to keep the patient alive. I believe in this case in addition to these anesthesias and the use of a morphin, post-operative is of extreme value. I think these papers are timely and I enjoyed them both very much. I think we can profit by them and can improve our results by the use of this method which I feel sure is the best known today.

Dr. F. Y. Cronk, Guthrie: I really wish I could have heard more of the paper. So many points of interest have come up that I want to say a few words. The shock in surgical work is really the most important of anything that we have to deal with. Regarding the question as to the best anesthetic, I think we should favor our patient as to the one that is indicated. I like the nitrous oxid anesthesia. I use a great deal of local anesthesia, but do not think the use of local anesthesia in cases where it will take two or three hours, is the best anesthesia in these cases. Local anes-

thesia combined with nitrous oxide is possibly one that gives a minimum amount of shock. I was in Cleveland with Dr. Allen (assisted there one year) and of course Dr. Crile was changing his methods from time to time, using nitrous oxide at that time and later on combined the local anesthesia. Regardless of the anesthesia we used, I think one of the most important things was the treatment of the patient immediately after operation. As soon as the operation is finished the majority of people think they must hurry the patient right off of the operating table. That is the place I think a great deal of shock occurs. When the operation is finished, no matter if we have two or three patients waiting for the operating table, if the patient is not in the best condition or had a long operation I feel that we should leave the patient on the operating table and keep them warm and comfortable. It is best even if they have to stay there for hours. Keep them warm and do not pick them up and toss them around getting them in bed. I think that is the place where a lot of us produce a great amount of shock. I think this paper has come to us at a time when we should consider these things very closely and am very glad to hear so much discussion on them.

Dr. Jas. T. Riley, El Reno, Okla.: I have enjoyed this paper, especially the discussion, as I give a few anesthetics myself. I did not know until I heard the paper that the anesthesia was blamed for the shock. I believe these things are more the fault of the surgeon than the anesthesia. The vomiting, I think, can be eliminated by diminishing the amount of internal shock. My experience in anesthesia has been that there is not very much shock to the operations unless the patient is subjected to hemorrhage and other unnecessary shock. My experience has been principally ether. I have operated about 1500 cases in El Reno. The signs I have used in giving anesthetics are the ear and the pulse along with the respiration. In a large measure the vomiting can be eliminated by turning the patient's head to one side and allowing the mucous to drain out of the side of the mouth. Unless this is done it has to fall back in the oesophagus during the administration of the anesthetic. I can also go by the redness of the patient's ear. I never allow the eyes or even the lid to be touched, as I believe our soiled fingers will set up a conjunctivitis that will be far worse. I cover the patient's eyes with absorbent cotton and then put a towel over them to prevent getting ether in the eye. You all know that conjunctivitis caused by ether is very painful to the patient. I believe too much blame is laid to the anesthesia that rightly belongs to the surgeon.

Dr. J. F. Kuhn, Oklahoma City: I think the defense that Dr. Cronk has given to the anesthesia is very timely, and that the form of shock is the essential thing to be remembered and not so much the form of anesthetic that is used. I believe that we ought to bear in mind the selection of the anesthetic and the action of the surgeon and all the operating force should bear in mind. The first thing that should be done is for the patient to be brought to the table in a calm state of mind. Yet, in the majority of cases, your patient selected you as the surgeon and has confidence in you. If that is the case, you must prepare his mind for this procedure, which is to him a very momentous occasion. No matter how frequently you hear: "We don't object to the operation, but are afraid of the anesthetic." In reality it is the operation that is giving them the concern and not the anesthetic.

If your patient is prepared to go on the operating table with a feeling of confidence in you, you have largely done away with shock. There is a certain something that is going on in the operating room at all times—certain bustle and commotion and discussion of the possibility of hemorhage, etc.—and your patient is conscious of these words. The patient hears these words and his mind rests too much on the operation. Some few patients may be thoroughly acquainted with local anesthesia and overcome

that feeling of awe; feeling which will produce this shock. Local anesthesia, I do not think, will work in every case, and if it is used in every case you are bound to have some shock. On the other hand, if you select ether or any other good anesthesia you will have some patients who will also succumb to shock for the reason that commotion occurs during the operating period and at the end of the operating period. About the time you are concluding your operation and are just about finished, your patient is sufficiently well anesthetized to feel no pain, but just the same the subconscious mind is conscious of what is going on and as you are completing the operation the patient is becoming conscious of the confusion and the sound around them. My idea of the thing is to have the whole operating room as quiet as possible; to stop all form of commotion when the patient is through with the operation. Stop the anesthetic as soon as you feel that the time is ripe. Keep the patient quietly on the table until he has recovered to a certain normal state. This, to my mind, is all there is to the selection of anesthesia. You can't let one anesthesia replace everything. You must have a selection of anesthesia. One will not do for everything. And as Dr. Watson has said, you must have one portion for the blocking of nerves and another for the complete anesthesia. This perhaps is the ideal of all cases. No one anesthetic is perfect and I doubt whether we will ever attain such an ideal. I do believe it is the proper selection of the combination, and not only the anesthesia but the surgeon and all of his assistants and operating room force.

Dr. Rotter, Parsons, Kansas: I feel interested in this susbject and cannot be kept down. Perhaps you have heard the expression, "I have a constipation of ideas," so I don't know what to say first. Almost every doctor that has got up to discuss the paper before me has said some of the things I am heartily in favor of. Shock is a thing that interests every man that does very much in surgery. Just what are the things that produce it? I do not believe the surgeon is to be blamed wholly for it and I believe the anesthesia, the surgeon and the patient are all three to be blamed for it. I was unlucky enough to lose a patient yesterday from shock. He was in fairly good health. I did a prostatectomy on him. He came in with the idea that he was not going to get well; was not going to live the way he was. He said he could not get well the way he was; that he would rather be dead than like he was, and was willing to take his chances on the operating table. He had a very bad bladder and we tried to do all we could. I think I dug the first shovel full of dirt for his grave by not reassuring him that he was going to come out all right. If we could study more about this psychology problem the doctors would not have so many cults to deal with. The osteopath, Christian Scientist, mental healer, etc., would not have the place that they now have if we studied a little more about psychology. I want to speak of some of the things in connection with the general anesthesia, in working with your patient. The pupillary reflex, I do not think, ought to be abolished altogether. It is about the only way of knowing just where the patient is—whether patient is deeply anesthetized or waking—and this is about the only way we have to tell as to that. The pupil is the only way to tell whether the patient is waking up or not. In the pupillary sign in your patient, if the patient is waking up, the pupil will relax; if in the paralytical state, the pupil is set. I think the assurance on the part of the surgeon that the patient will come out all right has a great deal to do with the lessening of the shock. They come to you with all confidence, you might say, to feel you out.

I am in the habit of using ether and using morphine as a preliminary, as the morphine reduces the patient to a state where you don't have to have so much ether. As to the method used by Dr. Crile, I am a very small

man to criticize Dr. Crile. I am in the habit of closing up the pores of the skin by using a solution of 95% alcohol. Then it acts as an anesthesia and also as an antiseptic. I have not had an infected case following clean cuts—I do not remember when—and another thing, I do remove the patient right off the table. I do not think they ought to be on the table after the operation is finished. As to the suggestion, it operates only in the patient who comes to you and you put them to sleep. I believe when they are put to sleep with ether or any other narcotic that both of the minds are put to sleep. You can talk subjective mind, suggestions and things of that sort to a subjective mind, but not when they are not surgically asleep. I think it is much better to remove them right off the table when the operation is completed, before they are conscious of the pain, rather than to leave them on the table until they are wide awake and much more conscious of pain and handling. Make them comfortable; put blankets around them and keep them warm just as though they were on the table. Another thing I do is to cover the abdomen with an electric pad. I think a great amount of the pain is relieved in this way.

Dr. F. R. Wheeler, Mannford, Okla.: We have gotten into a school of mental philosophic discussion about this subject mind, or this subconscious mind.

Dr. Sanger, Oklahoma City: I have enjoyed the two papers very much and I have enjoyed the discussion still more. There are one or two points I want to emphasize and that is we should encourage the patient. I have in mind now one family (three children, husband and wife). I have done a good deal of work for that family and every time I go to work with the children they will say: "Now, that Doctor is a good Doctor, and you are going to like him and going to enjoy this and the nice treatment you are going to receive." I have given every one of those children hypodermics of serum treatment and they would turn around and smile while I was injecting the medicine in the muscle. Now, other patients we have, said to the children: "That old mean doctor is going to hurt you," and they almost go into spasms before they were touched. Another thing, this reminds me of teaching a Sunday school of grown people. All have their opinions and after all is said and done they have the same opinion as they had before.

There is one thing I do not believe in—this nitrous oxide gas. I would not take it and don't believe I would give it to a patient of mine. I have seen people go under it in convulsions and turn black. It is merely suffocating them. I have heard it discussed favorably, but don't believe in it. I have seen it used in the hospitals, but I like local anesthesia. All these anesthesias we have been discussing reminds me of the regular physician compared to the different cults—the chiropractor, osteopaths and Christian Scientists. In the end the regular physician will surive the others, and the same way with the anesthesias. Many local anesthetics are being tried that I don't believe will hold out, and I have found in an operation that requires half an hour or a longer or shorter time that ether, other things considered, is the best. I have given local anesthesia and had the patient sit up and smile while I was giving it, yet if I would suggest or ask the patient. "Are you getting sick?" they nearly always say, "Yes, I am getting sick." And if you tell them that they are going to stand it well and are going to have an exalted pleasant feeling, it will do the same thing. I believe in suggestion to a great extent and, if you will say it, Christian Science.

Dr. Curt von Wedel, Oklahoma City: Mr. Chairman, since Dr. Watson has read a paper on psychology, I want to get down to a little fact. I am taking the liberty of quoting on this paper because it has been my pleasure

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to see this experiment done on dogs. We took and pared a splanchnic nerve with ether and morphine and bound that nerve on an anvil without any blocking. We took another dog and took that same nerve and blocked it and the difference between the blocked nerve and the unblocked one was practically none. However, we allowed the dog to go without morphine and as soon as he had pain his blood pressure dropped and he went into shock. So that one of the important causes of the shock is the associate pain and not so much the injury to the specific nerve. In another dog the abdomen was opened and closed under a similar anesthesia without shock. Other dogs were opened and several incisions were made under a general anesthesia with morphinization. Practically no shock was apparent; however, on the third experiment we traumatized the intestines and those dogs went into profound shock.. I think we used a sixth, and on the larger dogs one-fourth. Dogs take morphine very rapidly—very much more rapidly than a man. With other dogs we used a Bennett Inhaler, cut off the air and made them re-breathe their carbon dioxide. When the carbon dioxide went into the blood it showed a shock. I think a great deal of the shock associated with anesthesia, whether it be ether or whether it be nitrous oxide, is because of the carbon dioxide of the blood.

Dr. J. H. White, Muskogee: Doctor, you want shock with your operation. Make a railroad accident out of it, and it seems to me that you will get the shock. It seems to me that all this talk of anesthesia producing shock is out of the question. How many of us doing surgical operations today are troubled with shock following it unless it is a prolonged operation with a great deal of anesthesia taken or unless there is a great deal of hemorrhage? The condition of the patient before the anesthetic is given has a great deal to do with it. A preliminary hypodermic of morphine, one-eighth or one-fourth, and enough ether can be used. That and a local anesthesia seems to me all that is necessary in doing the operative work that we have to do. As to the use of morphine before operation, I use it and will not let my patient suffer if I can make them comfortable, and if it is necessary to give morphine to do it. If it is necessary to stand them on their heads, I do it.

Dr. T. C. Burns: In closing there are just a few points I want to bring out. I was mighty glad to hear that some of the men don't believe that the anesthesia is to blame for everything in the patient that goes wrong. Take, for instance, in shock, I have noticed, in giving anesthetic, that sometimes where the surgeon makes a very small incision and starts to stretch the skin to make it large enough to get both hands and begin to traumatize the intestines, you are going to notice first that your respiration gets more rapid, and that the pulse immediately jumps and gets faster. In regard to the pupillary reflex, I think the pupillary reflex is mighty good, but you can't give anesthesia all the time and be governed by the pupillary reflex. For example, if you give anesthesia to a "nigger" and gaze in his eyes and try to see the pupil, you are in trouble right there. You have to go according to the breathing. Another thing, you take and start in with the pupillary reflex and try it out several times. After a time you see the pupillary refiex gets sluggish and will stay that way for the reason that you have used it so much. You can't give an anesthetic and use one sign alone to tell where your patient is. The color of your patient, the heart action, etc., are all things that go to tell where your patient is, and lots of times when we get so we don't know just where they are I believe it is nothing more than right to let them come out to find out where they are and put them back in.

I also was very much pleased in the remarks that Dr. von Wedel made. He stood up for the anesthetist. Now, Dr. Sanger—in regard to him—to

the point he brought out—where the patient turns black. Gentlemen, that is not anesthesia; positively not anesthesia. It is simply asphyxiation, and I don't call asphyxiation anesthesia. There is no necessity of having any convulsions whatever. When you have a patient that is not relaxed—that is perfectly rigid—you can't operate that way, but they must have prompt treatment or they are going over the river.

The best appeal for anesthesia is this: What would you like to take if you were going under for an operation? Would you like one that would suffocate you, or would you rather have one where the mask is placed over your mouth and you are asleep before you could count five. I know a case where a lady had taken chloroform and they had to wake her and work with her to bring her back to life. The next time she was operated on she took ether. She said she thought she was going to die again and that she would not take ether. I started in and gave her the gas. Her pulse was 90 and there was not a bit of cyanosis. I claim that you should have no cyanosis whatever. A few years ago they used to think you had to get them as black as your hat to put them under, but that is all done away with and now you want to keep them pink.

In conclusion I want to mention three or four points of my paper, the first of which is the importance of anesthesia. I consider that anesthesia is just as important as a surgical operation for the reason that you have got to guide the patient through the operation. A patient is liable to die on the table from a surgical operation. You have to take care of that patient during that time. The surgeon has all he can do to look after the operation, and I think he ought to do only one of the two things.

Dr. Leigh F. Watson (Closing discussion): I do not believe the anesthesia is to blame for the shock except in a minor degree. The charts set forth the local and combined anesthesia followed by nerve blocking with no general anesthesia. Chloroform has exactly the same effect as ether so far as the brain effect goes. You can give it just as often as you give ether and get as much destruction of the brain cells, which, as you know, are never replaced. When a child starts out in life he has just so many, and every time he takes ether or chloroform he has just that many less left. So far as the study of shock goes, I believe the only accurate indication is the blood pressure and, secondly, the pulse. At least that is the observation made by Crile and, as you know, he has made a study of shock for twenty years. Of course we all know that Dr. Crile and others differ on certain points, but I feel that they agree on the essentials. Dr. White made a plea for larger doses of morphine after operation. This, to my mind, is essential. It saves the patient from pneumonia, keeps the lungs properly filled with air and prevents accumulation of bronchial secretion.

As far as Dr. Kuhn objecting to the use of local anesthesia not being adaptable to every case, I think any man who uses local anesthesia to any extent would not try to use it in every case. If they object to it, it is a waste of time for you to use it, but often you can start the local and employ the general, at the most painful period. Oftimes you can open the abdomen with local and give a short ether. Of course the closure is done under local.

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THIS IS THE OFFICIAL JOURNAL OF THE OKLAHOMA STATE MEDICAL ASSOCIATION. ALL COMMUNICATIONS SHOULD BE ADDRESSED TO THE JOURNAL OF THE OKLAHOMA STATE MEDICAL ASSOCIATION, BARNES BUILDING, MUSKOGEE, OKLAHOMA.

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Articles sent this Journal for publication and all those read at the annual meetings of the State Association are the sole property of this Journal. The Journal relies on each individual contributor's strict adherence to this well-known rule of medical journalism. In the event an article sent this Journal for publication is published before appearance in the Journal, the manuscript will be returned to the writer.

Failure to receive the Journal should call for immediate notification of the editor, 507 Barnes Building, Muskogee, Okla.

Local news of possible interest to the medical profession, notes on removals, changes in address, deaths and weddings will be gratefully received.

Advertising of articles, drugs or compounds not approved by the Council on Pharmacy of the A. M. A. will not be accepted.

Advertising rates will be supplied on application. It is suggested that wherever possible members of the State Association should patronize our advertisers in preference to others as a matter of fair reciprocity.

EDITORIAL

THE DEPARTMENT OF AGRICULTURE AND MISBRANDED DRUGS.

Perhaps no greater blow could be given manufacturers of fake products than a statement of their falsity issued by the Department of Agriculture. We have before us a circular issued by the information office of the Department, which, in clear-cut terms, brands more than fifty of the regular supporters of our weekly and daily papers as fakes pure and simple. This statement will be read with more interest and will carry more conviction to the mind of the reader than if issued from any other source. The bulk of supporters of patent medicines comes from the class of people who can less afford to waste their means than any others, and farmers and laborers especially are the victims of the delusions offered in the way of cures of troubles often more imaginary than real, so this publication will open their eyes to the manner in which they have been bilked. It does not carry with it the possibility of the statement being tinctured with prejudice as one coming from a medical source.

We have never believed that the investigation of these matters should come under the jurisdiction of a Department of Agriculture. An investigation of finances, navigation, war and navy matters would be more in place in their hands than the investigation of intricate chemical, food and drug problems is, but as we have the system foisted on us by years of foolish and unnecessary precedent, we must make the best of it until there is a sane change to a National Department of Health. In this connection no more good can possibly be done than to have the results of the Department's investigations widely published in such quarters as will do most good. We have always held that nothing could sting the isms, cults and fakirs generally more than publicity. They thrive on the ignorant and thoughtless, the hopeless and depressed, and darkness is their most efficient ally.

SURGICAL AND THERAPEUTIC NOTES AND SUGGESTIONS

EDITED BY DRS. L. S. WILLOUR, McALESTER, and F. Y. CRONK, GUTHRIE

"It is also necessary that the minds of physicians be purged of the belief that we have in potassium iodid an antisyphilitic agency. I have so many times dwelt on the fact that potassium iodid has not the slightest claim to be considered an agency of any value whatsoever to combat the activities of the pale spirochetes that I hesitate to revert to it again."

C. A. T. —JOSEPH COLLINS.

Were a surgeon to read a paper before a surgical section earnestly pleading for the treatment of surgical inflammation by rest, his efforts would be regarded as "carrying coal to Newcastle" for all his surgical hearers know that accepted program already; and they practice it every day. Why is it necessary, then, to remind physicians that a tuberculosis inflammation involving lung tissue should likewise be treated by rest and not by exercise?

—BOYD McCORNICK.

In Alkaline Cystitis.

Wash the bladder thoroughly with sterile water and then inject three (3) Bulgarian Bacillus tablets suspended in an ounce of sterile water and have the patient retain as long as possible. This may be repeated two or three times a day.

(Remember that the H. & W. tablets have the greatest number of live organisms.)

—FRANCIS R. HAGNER.

The best disinfectant for the skin and hands:

Acetone (commercial), 40 parts; denatured alcohol, 60 parts, pyxol, 2 parts.

—ELLICE McDONALD.

Patients suffering from intestinal obstruction, whether this be due to strangulated hernia, constriction by bands or adhesions, volvulus, intussusception or kinking of intestines, Meckel's diverticulum, gall stones or carcinoma, should be operated at once and they should never, under any circumstances, receive either cathartics or food by mouth after this condition is even suspected.

—A. J. OCHSNER.

A urine normal on clinical examination does not exclude the possibility of cortical renal abscess.

—EDWARD P. RICHARDSON.

A glycosuria should not deter the performance of an emergency operation, but other cases should not be operated in which acetone, diacetic acid and ammonia can not be reduced by preliminary treatment. The percentage of sugar is no criterion, as fatal results have followed when sugar was temporarily absent.

—E. H. RILEY.

When a uterine fibroid tumor suddenly begins to grow rapidly, it is usually due to pregnancy or cystic degeneration.

—W. EASTERLY ASHTON.

Delay after the first warning of cancer is dangerous. Waiting, watching and hope with signs and symptoms of cancer is gambling with death.

L. S. W. —JOSEPH COLT BLOODGOOD.

MEDICAL ASSOCIATION OF THE SOUTHWEST.

This organization will hold its annual meeting in Oklahoma City on October 11, 12 and 13. The 11th will be devoted to clinics offered by the profession of Oklahoma City. Drs. John B. Murphy and Francis M. Pottenger will be the guests of honor of the meeting and will deliver orations on the first day. Headquarters will be maintained at the Lee-Huckins Hotel.

PERSONAL AND GENERAL NEWS

Dr. J. Hutchings White, Muskogee, is in Boston.

Dr. T. B. Hinson has moved from Thomas to Enid.

Dr. H. A. Lile, Aline, has begun construction of a hospital.

Dr. J. B. Leisure of Watonga is taking a vacation in Colorado.

Dr. W. E. Lamerton, Enid, has returned from the Mayo Clinics.

Dr. W. L. Moore, Broken Bow, vacationed in Arkansas in August.

Dr. C. M. Pratt of Maysville is preparing to locate in Pauls Valley.

Dr. P. L. Sanders of Carnegie has returned from the Pacific Coast.

Dr. J. W. Childs of Tulsa is doing special work in Tulane University.

Dr. T. C. Beeler of Guymon died suddenly from heart disease July 17th.

Dr. T. H. Flesher, Edmund, has returned from the California exposition.

Dr. and Mrs. J. T. Riley, El Reno, are traveling in Canada and California.

Dr.Porter Norton, Mangum, spent his vacation in Northwestern Arkansas.

Dr. A. W. White, Oklahoma City, is doing special work with Sippy in Chicago.

Dr. George H. Wallace, Cheyenne, is doing special work in St. Louis and Chicago.

Dr. S. H. Welch, Dacoma, is in New York, taking special work in the post-graduate.

Dr. E. Brent Mitchell, Lawton, has returned home after an extended stay in Florida.

Dr. H. L. Summers, Osage, accompanied by his wife, is visiting the San Francisco exposition.

Dr. E. T. Robinson, Cleveland, accompanied by Mrs. Robinson, visited eastern points in August.

Dr. W. W. Brodie, Tulsa, took an automobile trip in August, visiting the Chicago Clinics during his absence.

Dr. and Mrs. W. L. Kendall, Enid, are home from Chicago, where the Doctor has been doing special work.

Dr. B. F. Johnson, Fairview, took an automobile trip to Virginia in August. He was accompanied by his family.

Dr. P. A. Smithe, Enid, who several months ago went to Europe and was assigned to Austrian territory, has returned.

The Alva Hospital, which has been closed for some time, has been re-opened. Miss Jane Howell is the superintendent.

Dr. and Mrs. M. T. J. Capshaw of Norman have returned from an extended visit from the Pacific Coast and eastern points.

Dr. V. Berry of Okmulgee resigned as County Superintendent of Health. Dr. W. M. Cott has been appointed to succeed him.

Dr. Walter Penquite, who was one of the delegates of the A. M. A. to San Francisco, has returned after an absence of two months.

Dr. C. N. Frazier, a popular physician of Hugo, died in that place September 3rd. His death was due to blood poisoning of a month's duration.

Dr. and Mrs. D. D. Weiser visited Petoskey, Michigan, for three months, during which time Dr. Weiser took special work in the Chicago Clinics.

Dr. Edward F. Davis, Oklahoma City, took six weeks' vacation on the Maine coast, visiting Washington, Cincinnati and Chicago, during August and September.

Dr. J. M. Byrum, Shawnee, was recently operated on for appendicitis at the Shawnee hospital. He will visit the Rochester and Chicago Clinics before returning to work.

Dr. O. F. Harper, Hinton, is recovering from an operation performed in the El Reno Sanitarium. His case was somewhat unusual, caused by a pin in the intestinal track.

Dr. T. L. Chambliss, Hugo, suffered an unusual accident recently when he and his team were badly stung by bees. Dr. Chambliss suffered severely from many stings and was badly prostrated. One of the horses died in a few minutes.

Dr. Fowler Border, Mangum, is out with a red hot communication castigating officers of Greer county, and especially the county attorney. Dr. Border charges that there is gross maladministration in the dismissal of charges against officers of the Mangum Light Company and others who were charged with conspiracy to injure Dr. Border, who, as mayor, opposed some of the plans of the Light Company.

Dr. Ross D. Long of Oklahoma City writes from "somewhere in France" that the 23rd General Hospital, British Expeditionary Force, is keeping him busy, and that Dr. George D. McLean, who is with him, is in the same condition. As usual there is a dearth of news as to what is going on, military censorship preventing comment on actual happenings.

CORRESPONDENCE AND MISCELLANEOUS

....., Oklahoma, August 30, 1915.

Dr. C. A. Thompson, Muskogee, Okla.

Dear Doctor:—Relating to my prospective damage suit, of which I wrote you a few days ago, am glad to say that the party has finally left town and has dropped the matter. I assure you that I appreciate your interest taken in my behalf, and that it was a great comfort to me. This matter is something entirely new to me, but have been on the lookout for some time. I feel the correctness of your article in the State Journal of last month on this subject.

Fraternally,

....., Okla., September 20, 1915.

Dr. C. A. Thompson, Muskogee, Okla.

My Dear Doctor:—Yours of the 18th inst. duly received and the decision of the committee noted. I have but little comment to make except to say that the logic of the committee was not well taken. I have found out that I made a serious mistake when I dropped my defense policy with an old line company, and I assure you and your defense committee, that I shall lose no time in taking out another policy which will not grasp at technicalities to avoid their obligations. I assure you that I do not need the assistance financially, as I am fully able to meet the expense, but your committee can never make me believe that I was not entitled to it.

Yours truly,

NOTE.—This suit was based on an operation performed in January, 1915, and a few days after treatment connected with the case. The State Medical Association does not undertake to defend cases the cause of which originated before July 1st, 1915. No indemnifying insurance company ever undertook to defend an action, the cause of which arose prior to the date of the policy. The implication in the above statement that a "serious mistake" was made when he dropped his old line insurance, hinged on organization of medical defense of the State Association, is obviously incorrect. If the Doctor had old line insurance in January, 1915, they would now be defending his suit unless there was an express clause to the contrary. The observation that the Defense Committee is grasping at technicalities to avoid its obligations is also untrue. The Defense Committee does not feel that it has a right to spend the fund intrusted to it in causes originating before organization. In this case, the matter was tried out and a small judgment on cross suit obtained against the doctor before he ever notified the committee. That of itself bars him from the benefit of the defense, more especially if he had prior knowledge that that defense was to be raised. It is likely that the medical defense committee will undertake to defend cross suits, but whenever possible they should have the notice called for in the agreement they made to the members of the profession early in July.—Editor.

Oklahoma City, Sept. 22, 1915.

Dr. Claude A. Thompson, Secretary State Medical Association, Muskogee, Okla.

Dear Dr. Thompson:—As the time of the meeting of the Southern Medical Association at Dallas, Texas, is drawing near, I want to extend an invitation through The Journal to every reputable physician in the State of Oklahoma that is a member of our State Medical Association to go to Dallas and attend this meeting, and become a member of the Southern Medical.

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This Association has grown rapidly in the past few years, being composed of the very best men of the South and West. The membership fee is only three dollars, including the Southern Medical Journal, which is one of our best periodicals.

As Councilor for the State of Oklahoma I would indeed be glad to have the profession of this State well represented at the Dallas meeting, which will take place Nov. 8th-11th, 1915.

The profession of Dallas are going to give this Association one of the greatest receptions it has ever had, and knowing the profession of Texas as I do, I know everybody will be entertained both royally and loyally, so let's all go.

Respectfully,

M. SMITH,
Councilor, State of Oklahoma.

MEDICAL ETIQUETTE—PERPLEXING PROBLEM AS TO CORRECT WAY OF SIGNING HOTEL REGISTERS.

Questions of etiquette, like problems in precedence, are seldom given serious consideration by people with a sense of humor. There are certain conventions based on common sense or instinctive politeness, which all but the boorish accept and follow, yet between these and the artificial code of sects, classes and professions, there is a vast difference.

Medical men in particular have come in for many jokes at the expense of artificial etiquette. They are sellers of expert services, but are not supposed to advertise their abilities in the classified columns at the regular rates, yet it is permissible to benefit by all the gratuitous publicity which comes in their way. Some doctors are, of course, superior to this little hypocrisy and pay for their advertising like anybody else, but they are deemed to be guilty of a breach of medical etiquette as defined by certain practitioners.

But let it be counted unto the profession for righteousness, or good taste, or what you will, that a majority of the doctors now visiting San Francisco have signed hotel registers as "Thomas Jones," not "Dr. Thomas Jones," nor "Thomas Jones, M. D."

There is no more reason for "Dr. Jones" than for "Jones, attorney, architect, engineer, editor, dentist, actor, aviator, janitor or street car conductor."

As for "Thomas Jones, M. D.," that ought to have been cured by the story of the visitor who signed himself "Bill Brown, B. B. B. B. B. B. B." The hotel clerk took a fit, but Bill Brown expained that the procession of "B's" stood for the "best blooming bugle blower in the Boston Brass Band."—San Francisco Examiner.

PAY IN INSTALLMENTS.

We are glad to know that Mr. Blessing, a member of the state industrial commission, generally accredited to organized labor, has taken a strong stand in favor of paying claims arising under the workman's compensation law in installments instead of a bulk sum.

In possibly 95% of the cases where a workman will be injured and entitled to compensation the money ought to be paid in installments, following such periods as were followed by the concern employing him in establishing their pay days. Especially is this true where the injury is a serious one and a compensation an amount of considerable size, as when the compensation reaches several hundred or a thousand dollars it is paid in a lump sum. In most cases it will be dissipated without either doing the injured man or the public much service.

There will be cases arising under this law where a bulk sum payment should undoubtedly be made, but they will be few and far between.

If the commission is to thoroughly protect the interest of the working man they will insist on installment payments, and will set their face firmly against allowing attorney fees to be paid out of the compensation where no attorney fees are necessary. The law will be a failure if the commission does not see to it that the damage suit lawyer is absolutely eliminated.

There is one other serious problem confronting the commission and that is the question of medical attention. Unless the state adopts a fee schedule about on the basis paid by the railroads and then watches the matter carefully there is a danger of this law becoming known as the "doctors' compensation" rather than the workman's compensation law. Of course the attorney fees and the doctor bill, if excessive, will ultimately fall on the workman.

The present workman's compensation act, we believe, will prove very satisfactory if the commission is thoroughly awake to the necessity of extending its protection to both the employer and the employe.—Times-Democrat.

DIRECTORY, OFFICERS OF OKLAHOMA MEDICAL ORGANIZATIONS, STATE MEDICAL ASSOCIATION.

Annual Meeting, Oklahoma City, May, 1916.

President—Dr. J. Hutchings White, Muskogee.

Vice-Presidents—Drs. Walter Penquite, Chickasha; L. T. Strother, Nowata; W. A. Cook, Tulsa.

Secretary-Treasurer-Editor—Dr. C. A. Thompson, Muskogee.

Delegates to American Medical Association—1915-1916, Dr. Walter Penquite, Chickasha; 1916-1917, Dr. John Riley, Oklahoma City.

COUNCILOR DISTRICTS.

1. Cimarron, Texas, Beaver, Harper, Ellis, Woods and Woodward; Councilor, Dr. J. M. Workman, Woodward.
2. Roger Mills, Beckham, Dewey, Custer, Washita and Woodward; Councilor, Dr. Ellis Lamb, Clinton.
3. Harmon, Greer, Jackson, Kiowa, Tillman, Comanche and Cotton; Councilor, Dr. G. P. Cherry, Mangum.
4. Major, Alfalfa, Grant, Garfield, Noble and Kay; Councilor, Dr. Walton McKenzie, Enid.
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6. Caddo, Grady, McClain, Garvin, Stephens and Jefferson; Councilor, Dr. C. M. Maupin, Waurika.
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8. Payne, Lincoln, Cleveland, Pottawatomie and Seminole; Councilor, Dr. H. M. Williams, Wellston.
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10. Washington, Nowata, Rogers, Craig, Ottawa, Mayes and Delaware; Councilor, Dr. R. L. Mitchell, Vinita; District Society, L. T. Strother, President, Nowata; J. V. Athey, Secretary, Bartlesville.
11. Wagoner, Muskogee, McIntosh, Haskell, Cherokee and Adair; Councilor, Dr. P. P. Nesbitt, Muskogee.
12. Hughes, Pittsburg, Latimer, LeFlore and Sequoyah; Councilor, Dr. L. S. Willour, McAlester.
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Next Meeting—Oklahoma City, October 11, 1915.

Address all communications to the Secretary, Dr. R. V. Smith, Daniel bldg., Tulsa.

XUM

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